AMENDMENTS TO THE SPECIFICATION

Please replace the indicated paragraphs and headings of the Specification (with reference to Patent Application Publication No. US 2004/0183620 A1, *i.e.*, this application) with the following Replacement Paragraphs:

Please replace paragraph [0003] with the following replacement paragraph:

[0003] Waveguides, such as for radar antennas, generally have a rectangular section and connection is usually made to the broader side wall or to the end wall of the waveguide by a coaxial connection. Such arrangements present no particular difficulties in producing a good performance and wide bandwidth. It can, however, be advantageous in some circumstances to make a connection to the narrow wall, such as in order to produce a compact configuration. If a connection is made to the narrow wall it usually produces a poor performance and narrow bandwidth.

Please replace the heading before paragraph [0004] with the following replacement heading:

~~BRIEF~~ SUMMARY OF THE INVENTION

Please replace paragraphs [0020] and [0021] with the following replacement paragraphs:

[0020] With reference now also to ~~FIGS. 2 to 4~~ FIG. 2, the transition 10 is mounted on a vertical wall 11 at the rear of the waveguide 4. The wall 11 is narrow compared with the upper and lower faces or walls 62 and 63 in FIG. 1. The transition 10 includes, externally, a cylindrical metal outer conductor 12, attached on the narrow wall 11, and a rod-like metal first or inner conductor 13 extending axially within the outer conductor to form a coaxial transmission line. The spacing of the transition 10 from the short circuit 60 in FIG. 1 is determined by the operating frequency. At its inner end 15, the conductor 13 is supported by an annular dielectric bead 16

fitted in a circular hole 17 in the waveguide wall 11. The inner end 15 of the conductor 13 is reduced in diameter to form a step 18 to maintain the same impedance as the input transmission line. A matching section in the conductor 13 is provided by a flange-like enlarged section 19 spaced a short distance from the rear wall 11. This is surrounded by a second dielectric bead 20, which helps support the inner conductor 13 within the outer conductor 12. The matching sections 19 and 20 match out any remaining mismatches in the junction. There are various alternative arrangements by which the input coaxial connection can be matched, such as by tuning screws inserted through the outer conductor or a step in the outer conductor.

[0021] The forward end of the inner conductor 13 is electrically connected with a second, rod-like conductor 21 in an axial configuration. The rear end of the second conductor 21 is stepped so that the dielectric bead 16 is trapped between the two conductors. The second conductor 21 extends forwardly across the waveguide 4 midway up its height and is electrically connected at its forward end with a transition plate or vane 23. The plate 23 is of L shape and extends transversely, at right angles to the conductor 21. The thickness of the plate 23 is similar to the diameter of the conductor 21. The lower edge 25 of the plate 23 is flat and is in electrical contact with the inner surface of the lower wall 63 of the waveguide 4, extending lengthwise of the waveguide to the right, centrally across its width. ~~The~~ As shown in FIG. 4, the upper edge 26 of the plate 23 has a step 27 dividing the plate into two sections 28 and 29 of different heights. The smaller height section 29 is located away from the junction with the conductor 21 and provides a quarter wave section. The plate 23, therefore, acts as a transition of the coaxial input with the narrow wall 11 of the waveguide 4, as illustrated in FIG. 3. This arrangement has been found to produce a very efficient transition with a wide bandwidth, typically giving a 6% bandwidth for a VSWR of better than 1.05 and an 11% bandwidth for a VSWR of better than 1.2.

Please replace paragraph [0023] with the following replacement paragraph:

[0023] With reference now to ~~FIGS. 7 to 9 there is shown~~ FIG. 7, an alternative transition 110 is shown where the coaxial connection extends parallel to the length of the waveguide 104. Equivalent components to those in the arrangement shown in FIGS. 1 to 4 are given ~~the same~~ a

reference number ~~with addition of 100~~ which is determined by adding "100" to the corresponding reference number in FIGS. 1-4. For example, FIGS. 7 and 8 show transition plate 123 and annular dielectric beads 116 and 120, which correspond, respectively, to transition plate 23 and annular dielectric beads 16 and 20 in FIG. 2. The inner conductor 113 of the coaxial input has a 90° bend and is formed by the combination of two cylindrical conductors 41 and 42 joined with adjacent faces 43 and 44 of a metal cube 45, shown in FIG. 9. The face 46 of the transition 110 and the inner conductor 41 in FIG. 8 are configured to provide an interface to a standard 7/8" EIA connector. In other respects, the construction of the transition 110 is the same as in the arrangement of FIGS. 1 to 4. This transition 110 has the advantage that the input connector and its associated cable extends parallel to the waveguide, thereby allowing for a particularly compact configuration.